

APPENDIX : Response to Comments

Finding of No Significant Impact Battlefield Restoration at Railroad Redoubt

Vicksburg National Military Park

Millsprings Battlefield Association

Comment: It is extremely hard to understand the siege of Vicksburg when you cannot see the opposing lines. [*“NOTE: This is a representative example of the 74 comments received in favor of implementing the park’s Preferred Alternative.”*]

NPS Response: The fact that a growth of trees dating from the 1930’s now obscures much of what was a cleared landscape during the Siege of Vicksburg is acknowledged. The battlefield restoration project at Railroad Redoubt, which was the subject of the environmental assessment, is an effort by the staff at Vicksburg NMP to help rectify the present situation within the constraints of present-day budgets, staffing, and policy.

Keith E. Knoke

Comment: The use of a 50-foot wide riparian strip of vegetation to act as a buffer to the wetland is a good solution. In fact, I would go so far as to recommend evaluating that thickness, as it seems somewhat *conservative*.

NPS Response: *To be clear, the Environmental Assessment (EA) calls for a 50-foot riparian buffer to be preserved on both sides of the linear wetland. The 100-foot riparian buffer size was chosen based upon a review of the relevant scientific literature that determined the approximate boundaries needed for protecting wetlands of this magnitude.*

Wayne McMaster

Comment: I agree with the planting of Bermuda grass on the cleared areas, however I think that possibly the grass should be allowed to grow to its natural height, which is not very high, maybe 10 – 12 inches high.

NPS Response: *The Bermuda grass that will be sown at the site, once established, will be maintained as needed and/or as circumstances allow. The maintenance will take place in the early fall and winter, if possible, thus avoiding the spring-summer breeding/nesting period of grassland bird species. For most of the year, therefore, the grass at the site will attain its maximum height, and provide forage and cover for a mix of grassland fauna.*

Mississippi Wildlife Federation

Comment: The State of Mississippi is currently undergoing a strategic planning process that addresses species of greatest conservation concern and need. Coordinating activities in this planning process would help ensure that any habitat changes acknowledge special species in Mississippi (MS) and that coordinated efforts are made to keep those species from becoming endangered and thus forcing agencies and the public to adjust to unwanted restrictions.

NPS Response: *Mississippi species of special concern have been taken into account in the EA. It is National Park Service (NPS) policy to treat state-listed species with the same accord as is due federal Threatened and Endangered (T&E) species. No state-listed species that are known to inhabit the park have been located during biological inventories within the project area. Both the United States Fish and Wildlife Service (US FWS) and the MS Department of Wildlife, Fisheries, and Parks (DWFP) were contacted as part of the EA process, and neither agency had comments regarding species of special concern. There is similar habitat to that being considered for removal at Railroad Redoubt within close proximity to the project area, and four nearby acres are being allowed to revegetate naturally. Organizations that possess environmental expertise will be included to provide input during the formulation of the CLR.*

Mississippi Department of Wildlife, Fisheries, and Parks

Comment: Given our mission, and the context and rationale for the project, the loss of migratory bird habitat due to the proposed work is a concern because of the possible scope or extent of habitat alteration. There is a difference between the work being limited to the 9.5 acres of the Railroad Redoubt project, and the consideration of this project as a “test case” for much larger scale alterations to the mixed-hardwood ridge and slope habitats.

The forests in Vicksburg NMP have provided an island of stable habitat within the larger delta region where the total amount of hardwood habitat has shrunk. The present state of forest succession may be an unfortunate situation for the historical features, cultural access features, and “view-sheds” of the park, but this is not so for the wildlife, and especially not for the migratory birds.

NPS Response: *The EA and this proposed project are limited to no more than 9.5 acres of battlefield restoration. Any further battlefield restoration beyond the 9.5 acres will be subject to a comprehensive public planning and compliance process. Prior to further battlefield restoration plans, the park’s Cultural Landscape Report (CLR) will be developed. The NPS will specifically request input from a variety of stakeholders including the State and Federal wildlife agencies and organizations who expressed interest throughout this current process. Further planning for battlefield restoration will result in a compliance document that would document and analyze individual and cumulative impacts from proposed restoration projects.*

Comment: Because the majority of the trees are deciduous, vistas open up in the fall and winter. Temperatures are cool, and with the leaves off the trees, visitors can see over long distances in the park. These facts could be emphasized to potential park visitors.

NPS Response: *Most visitation occurs in the summer family vacation months when the park's vegetation is at its thickest. Unfortunately, even during the winter months, the park's wooded topography remains largely hidden by a non-native understory of Chinese privet. Regardless of the season, a forest cover is not indicative of siege-era conditions.*

Comment: The third alternative is the middle way. Where it is applied, it leaves some habitat, and gives some “view-shed” improvement, but this project should not be treated as a test case for the gradual application of Alternative 3 to upwards of 600 acres over time as funding becomes available. This is the way the hardwood habitats in the delta have disappeared- bit by bit over time. It would be unwise to deliberately reduce an ever-increasing acreage of high quality habitat for federally protected neotropical migratory birds on Federal land- especially when it is beyond dispute that their populations are in decline. If this project must be done, a better way would be to define the full scope of the project now.

NPS Response: *The park's General Management Plan (GMP) (and its accompanying Environmental Impact Statement) specify Railroad Redoubt as a high priority area for battlefield restoration. Until resources and funding become available allowing the park to perform a new comprehensive planning and compliance process, the older GMP and its stipulations remain in effect. Thus, an EA is the level of compliance being used to address this limited battlefield restoration project.*

Comment: It is hoped that **significantly** fewer than 600 acres will be affected! Prioritize areas that are best for “viewsheds”- keeping the footprint of this project to the **absolute minimum** necessary for improvement of the cultural landscape, negotiate the problems so there is agreement among the various competing interest groups and stakeholders, then take the project to completion. In other words, with full consideration of the importance and utility of this habitat, negotiate to fully define the smallest practical amount of acreage that will accomplish the needs and agree on the practices to be used at the outset- then execute the plan and let that be the end.

NPS Response: *That is the plan, except that this 9.5-acre project is being evaluated by an EA before the park institutes a comprehensive planning and compliance process looking at park-wide battlefield restoration possibilities sometime in the future, per its legislated mandate. This limited battlefield restoration project will serve to educate park staff regarding how to integrate cultural and natural landscape management in a sustainable manner while preserving significant resources in perpetuity. This consideration will be developed further during the CLR process.*

Jackson Audubon Society

Comment: I have reviewed the EA and I would encourage you to choose Alternative 1. I am concerned that the cutting of this 9.5-acres of forest is being justified as a no net loss of forest because of the discontinuation of mowing of another 10 acres of land. While this is technically true, the drastic change in the landscape and the net loss of second-growth forest will negatively impact nesting bird species of high conservation concern, including Swainson's, Kentucky, and worm-eating warblers. More important, I am concerned about the eventual consequences of these rehabilitation actions over the long term. The cumulative effects of the battlefield rehabilitation will destroy one of the few remaining protected loess-bluff and associated hardwood forests in N. America.

NPS Response: *It is unlikely that the removal of no more than 9.5 acres of forest will negatively affect nesting species of high conservation concern at a landscape scale. It is recognized, though, that the cumulative impacts of past, current, and future battlefield restoration (coupled with other habitat alteration activities across the landscape) may negatively affect these species. That is why the park will be analyzing VNMP's entire landscape in a CLR and following with a public process before any further battlefield restoration is considered within its boundaries, beyond what is addressed in this EA.*

Tom Pullen

Comment: At the Open House session on Oct. 28'th, it was mentioned that controlled burning would be used to help maintain the site once trees were removed. The EA should fully address, in detail, the impacts of this approach to site maintenance. Local residents could have health or safety concerns with the smoke generated by such burning, and this potential impact should be fully explored in the EA.

NPS Response: *If this was said at the public meeting, it was either misspoken or misinterpreted. The park's current Fire Management Plan (FMP) does not include burning at the project site. Therefore, prescribed burning will not be used to help maintain the project area in a cleared state, unless another FMP and environmental analysis is developed with public input.*

Comment: While I understand the need and desirability of vista clearing, I believe that the principles of good planning and the requirements of the NEPA demand that a comprehensive look be taken at all the sites where vista clearing may be desirable prior to embarking on any clearing work at a specific site such as the Railroad Redoubt. Only by evaluating potential impacts at each and every site in a comprehensive fashion can the NPS make a sound decision regarding which sites can be cleared in such a way as to maximize the battlefield interpretive benefit and, at the same time, minimize the adverse environmental impacts of clearing. Letting a donation of funds earmarked for vista clearing at the R.R. Redoubt drive the course of events at the park is putting the cart before the horse and smacks of arbitrary and capricious decision-making.

NPS Response: *Vicksburg National Military Park (VNMP) operates under a GMP that was instituted following a public compliance process. The GMP states that the Railroad*

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Redoubt project area is a high priority for battlefield restoration. The GMP was crafted in the light of the park's enabling legislation, as well as subsequent federal environmental mandates. The park is currently seeking avenues to fund a comprehensive public planning and compliance process that will update the GMP currently in use. The process, once instituted, will include a fresh and holistic evaluation of battlefield restoration goals and strategies for VNMP.

Comment: As an alternative to vista clearing, I believe the NPS should explore other options for improving battlefield interpretation. As I mentioned at the open house, I believe the use of computer graphics could be used to recreate the battlefield scene as it existed at the time of the Civil War and to give park visitors a taste for what the siege was really like. A presentation could be developed for showing at the Visitor Center that showed actual photographs of the battle site along with computer-generated views of the battle.

NPS Response: *As funding, equipment, and human resources become available, the park will pursue the use of computer technology to help interpret the Siege of Vicksburg to visitors. A future comprehensive planning and compliance process will most likely explore digital options for interpreting the park's resources. However, improved interpretation does not in and of itself meet the park's legislated mandate of restoring the battlefield to a semblance of its wartime appearance.*

Comment: Also, observation towers could be built to elevate the visitor so as to give a better perspective of the battlefield without the need to clear vistas or with minimal clearing. Moreover, such towers could serve a dual purpose in that they could also be used by those visitors interested in observing the wildlife of the park.

NPS Response: *Such towers used to exist within the park. They were removed many years ago, however, as they had become old and unsafe. They were also a visual intrusion and modern addition upon the historic landscape, and the NPS has recently removed such a tower at Gettysburg NMP. Any such tower newly erected at VNMP would have to be very tall indeed to raise viewers above the tree canopy. Therefore the safety risks and visual intrusion would compromise the tower's purpose.*

Comment: Although there would be benefits from vista clearing for the park visitor who is extremely interested in Civil War history, I wonder just what percentage of the visitor population actually has an intense interest in the details of the siege. Has the NPS quantified this segment? Perhaps more visitors would be better served by keeping the park forested and by further developing facilities for activities such as hiking, picnicking, or birding. Likewise, what do the residents of Vicksburg who regularly use the park for walking, jogging, or bicycling think? Before any vista clearing is implemented, I recommend the NPS fully evaluate these matters.

NPS Response: *It would be of interest from a social science perspective to research the demographics of the park's visitors and their patterns of use. The NPS has a social science program that does look into these matters. However, the NPS, and parks*

themselves, were created by congressional or presidential mandates that specify specific resources to be protected and interpreted. Visitor use patterns are considered in deciding management actions needed to meet these legal mandates, and will be considered in a more comprehensive planning process for the entire landscape.

Comment: Finally, I believe the NPS must fully recognize and understand the major importance and significance of the VNMP as a natural area prior to embarking upon any plan for vista clearing. The forests of the park constitute a highly significant block of loess hills upland forest habitat of major importance to many species of birds, mammals, amphibians, reptiles, and other wildlife and plants. Some limited vista clearing work can probably be done that will not cause a significant loss of important habitat, but any habitat removal must be done carefully and with full recognition of the need to fully mitigate for the loss of that habitat. Only through a comprehensive evaluation and study of all the potential vista clearing sites at one time can the true cumulative impact of habitat loss and mitigation be understood.

NPS Response: *The importance and significance of VNMP's natural resources, in the context of its enabling legislation and the NPS Organic Act, is acknowledged. The park's natural resources are taken into consideration in the EA, and will receive equal scrutiny when the park performs comprehensive planning and compliance in the future.*

William O. Nichols

Comment: However, I do have two other concerns about this provision of Alternative 3. My first concern is that the effort to maintain the height of the riparian strip at or below 20 feet imposes an additional workload on a maintenance division that is already sorely pressed to meet its current responsibilities.

NPS Response: *The maintenance division, during internal scoping and EA review, did not indicate that the additional workload would be debilitating to its operation. In fact, the maintenance of this area would be considered a priority item.*

Comment: My second concern is that this 20 foot height would be maintained by “topping” the trees. Such “topping” will result in many, if not all, of these trees eventually dying which in turn will result in erosion as “piping” of rainwater percolates through the voids in the soil created by the rotting tree roots.

NPS Response: *The twenty-foot-plus tall trees in the riparian zone would not necessarily be removed by “topping”. In fact, if the trees are of a sufficient girth that topping them would likely result in tree death, then those trees would be taken out individually by cutting them down at their bases. The resulting stumps and root balls would then be dug out, and the disturbed soil regraded to a natural appearance. It is thought that by utilizing the option of removing rather than topping large trees, the issue of increased erosion potential can be negated.*

Comment: The EA states that the 500-foot wetland is delineated by virtue of its hydrology but does not attempt to describe or qualify its value as a wetland. Furthermore, it acknowledges that this wetland is actually a tributary of Stout's Bayou which is located outside the park. The headwaters of this tributary about the railroad right-of-way which is maintained with the regular use of herbicides. Without more imperative data supporting the quality of the "wetland" it is not possible to assign it a meaningful significance. I would, however, urge reconsideration of your Preferred Alternative 3, in favor of Alternative 2 because the park's legislated mandate to "restor(e) the field to its condition at the time of the battle" clearly trumps the questionable value of this wetland.

NPS Response: *Per NPS policy, if a wetland is in a degraded state and it still possesses one of the three defining attributes (in this case, persistent hydrology), it is considered a wetland and must be treated accordingly.*

Barbara Qualls

Comment: The way the park is currently set up seems to work very well for interpretation. The cleared areas direct one's view to the associated scene across from areas with plaques. If more trees are cut, this directed view would be lost and interpretation of the historic events would be compromised.

NPS Response: *Under this EA's preferred alternative, the visitor's view will be directed to a specific historical scene by virtue of extant interpretive plaques, bluffs along the railroad, and adjoining wooded areas.*

Comment: If it is desired that the park look more like Rocky Springs, then cutting trees and letting subsequent erosion take over would be o.k.

NPS Response: *The goal of the project is not to emulate Rocky Springs, an area along the Natchez Trace Parkway. Rocky Springs was developed as an agricultural area where erosion control measures were not implemented. This project emphasizes the planting of sod-forming grasses and other measures to keep erosion of the landscape in check, while at the same time meeting the goal of limited battlefield restoration.*

Comment: Also, planting more grass would not help with the erosion and would add to the maintenance costs. I would suggest that no additional tree clearing take place and that the current grassy areas be allowed to grow into/be planted with native grasses and shrubs.

NPS Response: *Long-term experience (going back decades) at the park suggests that maintaining an area with a grass cover does inhibit erosion of the park's loess soil. While shrubs are not being considered for planting, historically native Bermuda grass is the method of choice for revegetation within the cleared project area, as recommended by the United States Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS).*

Comment: Cutting of mature trees will lead to a decline in some of those species, especially grosbeaks, tanagers, and orioles, which can be found in abundance during the proper seasons. Also, many warbler species use this unique habitat, several of which are declining in numbers, such as Swainson's, hooded, and worm-eating warblers.

NPS Response: *It is unlikely that this project alone will lead to a decline in any species on a landscape scale. However, to avoid negative effects accumulating upon any species at a landscape level, the park will not proceed with further battlefield restoration beyond this project until it has taken a long-term, comprehensive look at the issue in a formal planning and compliance process.*

Comment: Larger vistas of Bermuda grass (not a historical view!) will not be pleasing. Altering the landscape by cutting trees will only detract from the historical interpretation, as well as the pleasure of others (who are many) who use this park for various recreational purposes.

NPS Response: *As an NPS site, the park considers the impacts of its management actions on the recreational attributes of the site. The park's enabling legislation, however, elevates the site's historical resources to primary importance. This project reflects these facts, as the thrust of the project aims to protect and interpret the historical resource, while at the same time considers and mitigates to the greatest extent possible any adverse effects to the park's natural and recreational resources.*

United States Geological Survey- Biological Resources Division

Comment: The VNMP is the best place in Warren Co. and likely in all of west-central Mississippi to bird watch and to find species of high conservation concern, i.e. Swainson's, Worm-eating, and Kentucky warbler.

Removing up to 9.5 acres of forest cover, although a relatively small amount with respect to the VNMP as a whole, does reduce forest cover. I am also concerned about the general loss of loess bluff forest cover. The VNMP probably maintains the largest contiguous tract of loess bluff habitat on public lands in the U.S. The loss of these forests not only results in negative ecological consequences, but also the loss of a unique ecosystem and the inherent natural value these forests provide. The loess bluffs, including VNMP, were originally covered with thick, mature forests, similar to its present state, and returning the land to a battlefield appearance is unjustified and produces an unattractive, unnatural landscape.

NPS Response: *This EA addresses the restoration of 9.5 acres of park land. It is acknowledged that VNMP is a prime natural resource due to the forested loess bluff habitat within its boundaries, and the use of this habitat by many avian species. It is further recognized that forested loess-bluff habitat has become increasingly rare in this and other parts of the country. However, while the significant natural resources present in the park are of great concern, the park's primary mission is one of preservation and interpretation of the unique cultural landscape for which the park was established.*

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Future comprehensive long-term planning and compliance will look at the cumulative effects of any potential large-scale battlefield restoration on natural resources both within and outside of the park.

Comment: One of my concerns associated with the loss of forest cover at VNMP is that forests provide the best erosion control available. I have not seen any data showing grasses provide better erosion control than forests. In addition, I have discussed this issue with professional botanists and biologists and all agree that forests are the better option to prevent erosion. I've seen the sign along the s. loop that suggests grasses are better, but where are the data to support this assertion?

NPS Response: *In January 2005 VNMP contacted the Vicksburg office of the NRCS (formerly the Soil Conservation Service) regarding the question of soil loss rates particular to loess soil under different vegetative covers. NRCS staff visited the site and used a soil loss prediction formula (SLPF) in order to calculate differential erosion rates. SLPF takes into consideration the following factors: soil type, slope percent, slope length, average rainfall, ground cover, and conservation practices. The formula considered the current ground cover on the site, including: average number of trees per acre, average percent tree canopy cover, and average percent mulch cover. This produced an estimated annual average soil loss of 1.5 tons per acre. The formula was then altered to take into consideration a 100% Bermuda grass cover (outside of the wetland zone), the placement of erosion control blankets in concentrated flow areas, and an assumption of repeated mowing throughout the growing season until the turf becomes established. (In areas of the project site with greater than 3:1 slopes, this rate of maintenance would be continued even after turf establishment.) Considering the preceding assumptions, the estimated average annual soil loss rate would be reduced to .9 tons per acre.*

Comment: In addition, why is the VNMP allowing recently cleared areas that are highly susceptible to erosion to regenerate naturally? This appears to be a contradiction to the goals of the VNMP, which are to eventually reestablish the VNMP to battlefield conditions. For example, the 6 acres below Ft. Hill that are being left to regenerate naturally are sliding down the hillside because of lack of forested vegetation for an extended period of time. In addition, the 4 acres proposed for regeneration of the s. loop were cleared in recent years and are highly susceptible to erosion. The argument that grasses provide better erosion prevention than forest cover is unacceptable. Another problem in the proposal involves the statement of no net loss of woody acreage. The plan calls for leaving 4 acres of the s. loop and the 6 acres by Ft. Hill to regenerate and compensate for the clearing of the majority of the 9.5 acres in this proposal. Technically the NPS is maintaining "woody acreage", but this would drastically change the habitat through loss of mature forest cover and thus provide little value for wildlife, etc. In the public meeting concerning this proposal, a NPS employee made the statement that the NPS is maintaining woody acreage although the habitat is changing. In addition, there is a time lag of 70 years until the regeneration will provide suitable habitat for forest birds and other wildlife. This contrasts with VNMP goals and I do not accept that the VNMP will allow such acreage to become reestablished.

NPS Response: *The areas that the park is allowing to revegetate naturally (4 acres on the south loop) are in locations that are not crucial to telling the story of the siege. They are being set aside for revegetation to provide wooded habitat in the future, to form an improved vegetative screen between the park tour road and the boundary, as well as to offset some of the increased mowing responsibilities that will be necessitated by battlefield restoration at Railroad Redoubt. The 6 acres at Ft. Hill were mentioned for possible revegetation under Alternative 2, which is not the park's preferred alternative. (Ft. Hill is currently experiencing major slumping due to rainwater percolating down through the soil and emerging farther on down the hill. The precarious topographic position of Ft. Hill makes it doubtful that any sort of vegetative cover- grass or forest- would be able to hold it in place.) VNMP is committed to allowing forest cover to mature in areas that have been set aside for revegetation, though it is acknowledged that there will be a significant time-lag before these areas reach a mature state. This project deals with a maximum of 9.5 acres, and any further or large-scale battlefield restoration is contingent upon the park completing long-term comprehensive planning and compliance.*

Comment: Although funding for grass maintenance is a serious concern for NPS employees, maintenance costs will increase over time as more acres of grass will need to be mowed or periodically bush-hogged.

NPS Response: *There will be some increase in maintenance responsibilities, but in terms of maintaining the 9.5 acre project area, this was found to be a negligible increased work-load, especially with four acres on the south loop being left to revegetate naturally.*

Comment: In April 2004 I found two cerulean warblers, a species submitted for listing as Threatened on the Endangered Species List. Cerulean warblers formerly nested in the region, but have declined dramatically in the last 50 years with the loss of forest cover and are currently extremely rare nesting birds in MS. Reforestation and maintenance of existing mature forest are necessary to reestablish breeding populations of cerulean warblers in MS. In addition, the Nat. Aud. Soc. has recognized the VNMP as an Important Bird Area in MS and it is commonly recognized as one of the top 10 places to bird watch in the state of MS. The value to birders and conservationists will be lost if the majority of the VNMP becomes a monoculture grassland. The great abundance of birds migrating through and breeding in the VNMP, including rapidly declining species of high conservation concern, provide ample support for maintaining mature forest cover at VNMP.

NPS Response: *This EA addresses 9.5 acres of battlefield restoration. Removing 9.5 acres of woody acreage is unlikely to have a negative effect upon any avian species. Cumulative negative effects, at both the park and landscape level, are a concern, though, and future battlefield restoration will be addressed in the park's CLR and in a long-term, comprehensive planning and compliance effort.*

Comment: During the public meeting, NPS employees discussed mitigating wetland and forest cover losses at sites outside the VNMP. Specifically, locations in the delta region

of MS were mentioned for reforestation. Mitigating losses elsewhere is not an equal replacement of lost loess bluff forest cover. Loess bluff forests are comprised of a different suite of woody plant species, many of which are not found in bottomland sites.

NPS Response: *Mitigating (compensating) for wetland loss outside of the park would have to be done in a very similar ecological setting (loess soil forested bluff and ravine habitat), and thus the delta region would not be acceptable as such. If this was implied during the public meeting, it is being corrected through this response.*

Comment: I am also concerned about the proposal to plant Bermuda grass. Bermuda grass is listed as a pest species in many states and is highly invasive. Bermuda grass may have been “naturalized” at the time of the siege, however there is never any justification to intentionally plant an introduced or especially an invasive species. The proposal also directly contradicts the NPS invasive species eradication program as the NPS would be planting an invasive species. There are many native grasses that will provide the similar erosion control properties as Bermuda grass and simultaneously provide habitat for native wildlife if mowed or burned at the proper time of year. Burning native warm season grasses in late winter often provides for better seed production the next growing season, which if left uncut throughout the summer would provide habitat for breeding e. meadowlarks, common yellowthroats, possibly bobwhite quail, and many wintering sparrows. I would highly recommend referring to professional botanists that are experts in this field before planting Bermuda grass or any non-native plant.

NPS Response: *The park made a concerted effort to find acceptable native (ecological as opposed to historical) grass species to use for erosion control seeding in recently cleared areas. The NRCS erosion control study concluded that truly native species would be extremely difficult to establish. The study went on to say that erosion rates would be elevated significantly if native species were used, and that historically native Bermuda was the best choice under the circumstances. (Prior to European settlement of the area, the loess ridge and ravine habitat was thickly wooded. This habitat never existed as a grassland before the arrival of settlers, and the native grasses never evolved into a prairie-like growth form. It would be unnatural for ecologically native grasses to form a turf that could withstand the rigors of erosion control and frequent maintenance.) The bermuda, once established, would be cut infrequently on slopes of 3:1 or less, with the cuttings timed so as not to interfere with avian nesting activities to the greatest extent practicable.*

Comment: Also, the area was left open to erode until the 1930's where the ravines likely experienced greater amounts of erosion after the battle and before erosion control measures were taken. The ravines are likely deeper today than they were at the time of the battle, thus giving the public the perception that the ravines were as deep as they are now, which is untrue.

NPS Response: *According to historical records, the area now encompassed by the park was returned to agriculture after the Civil War. Even after the establishment of the park in 1899, many areas remained in farmland until the owners' leases expired. While*

erosion was a factor to be dealt with (as evidenced by the activities of the CCC), there is no evidence that large areas were left open to erode.

Comment: Loss of forest cover will also attract relic hunters to the VNMP. Although such issues have been addressed in the EA, additional patrols to safeguard the VNMP relics increases costs in manpower and resources and is unnecessary.

Currently few visitors read all the monuments placed in cleared areas further than 50 meters from the roadside. I doubt that maintaining more open grass will attract more visitors to read more of these distant monuments.

NPS Response: *The point of the project is not to attract people to walk through the fields to read the exposed plaques, though it is fine if they do so. The exposed terrain will be able to be seen from the road or certain vantage points. Exposing the terrain in a sustainable manner will bring the park further into line with its legal mandate, to restore the battlefield to a semblance of its wartime appearance.*

Comment: I think that scale models of the park and surrounding areas or digital simulations could greatly enhance the visitors' experience while not destroying the valuable forest cover presently found at VNMP. Additional roadside markers with historical pictures and text discussing what those areas looked like during the siege, describing the ravines, etc. would provide ample historical interpretation opportunities for visitors without removing the mature vegetation. This provides ample opportunity for visitors to enjoy the VNMP for its intended purpose while preserving the natural beauty of the loess bluffs and maintaining the multiple uses the VNMP provides the public.

NPS Response: *Enhanced/improved interpretation of park resources will most likely be explored as part of future comprehensive planning and compliance efforts. While the park does contain multiple resources and provides multiple uses to the visiting public, the park is obligated to stay true to its primary mission as delineated in its enabling legislation. The enabling legislation is always interpreted within the context of the NPS Organic Act, ensuring that all the park's cultural, natural, and recreational resources are given due consideration.*

Comment: Congress may have made a mandate in 1899, but this was many years before people realized the importance of conserving soil and water and the mandate is clearly outdated.

NPS Response: *This is one of the benefits of the park carrying out an environmental compliance process, because under the National Environmental Policy Act (NEPA) it is obligated to consider how its management actions affect all of the park's pertinent resources, including resources that were not in consideration when Congress created the park in 1899. Until it is changed by Congress, though, the park's mandate remains the preservation, restoration, and interpretation of the Siege of Vicksburg and its associated landscape features. Furthermore, as evidenced in the recent NRCS study, soil and water conservation at the site will be enhanced under the preferred alternative.*

NPS Gulf Coast Inventory & Monitoring Network

Comment: While the stated goal of the park's enabling legislation is to restore the battlefield to its "1863" appearance, it needs to be clarified that the goal is not intended to be accomplished literally, for to do so would require a scorched earth policy. In addition, there should be some discussion to emphasize that since passage of the park's enabling legislation, there has been voluminous legislation passed to protect various other aspects of federal lands and resources that have an equal footing with a park's enabling legislation.

NPS Response: *It is acknowledged that battlefield restoration, in terms of this project, would expose a certain amount of landscape, to be maintained with a grassy cover, in order for the public to gain a greater appreciation of the cleared terrain that was such a significant factor throughout the Siege of Vicksburg. This is a legislated purpose of the park. Through the environmental compliance process, all of the pertinent Federal environmental laws that have been enacted since the establishment of the park are considered in terms of how the project in question interacts with them. In fact, the project, in each of the alternatives, is designed so as to comply with wetland-related and other laws, not to mention NEPA itself.*

Comment: A magnanimous donation of funds sufficient to restore a historic landscape on 9.5 acres of land should be appropriately acknowledged by indicating the amount of the donation and naming and giving credit to that generous donor. There should be some discussion as to how an individual can avail themselves of having a specific project of special concern to them implemented via a substantial donation to a national park.

NPS Response: *The donor is Mr. John Nau, who is the Chairman of the National Advisory Council on Historic Preservation. The donation was in the amount of \$15,000. The project for which the donation was offered is in line with the park's mission of restoring segments of the park's landscape to a closer approximation of its wartime appearance, and is specifically mentioned in its GMP. This proposed project is undergoing an environmental compliance process, as would any project initiated with appropriated funding.*

Comment: There should be some discussion of the economic impact(s) to the park's operational budget by the need to implement a specific project at the behest of a private individual.

NPS Response: *The economic impact to the park's budget should this 9.5-acre project be implemented is minimal. The biggest impact would be in the form of additional mowing responsibilities, with concomitant fuel usage and mower maintenance requirements.*

Comment: In conjunction with the park's exotic plant management program, use of an exotic should be discontinued and a truly "native" grass species utilized for erosion control.

NPS Response: *Ecologically native grasses are preferred over historically native grasses, and would be used provided they did as effective a job as Bermuda grass at holding the loess soil in place. Unfortunately, as the NRCS study verified, ecologically native grasses in the loess soil landscape never evolved turf-like, sod-forming characteristics, and thus are not an appropriate choice for a landscape cover to reduce soil erosion. Conversely, Bermuda grass, which has been documented as having existed in the area at the time of the siege, does do a satisfactory job at holding down erosion of the loess soil.*

Comment: It is stated that “an inventory of aquatic invertebrate fauna and water quality testing specific to this stretch of water would be needed to quantify any existing degradation.” In that an inventory of aquatic invertebrate fauna would potentially include any T&E mussel species, project implementation should not proceed until the absence of any T&E mussels is established.

NPS Response: *Mussels, in general, inhabit moderate to large rivers with moderate to swift currents. The wetland stream within the project area is small and the current, when flowing, flows slowly. (Except during significant rain events.) Furthermore, the Preferred Alternative specifically protects the stream with a 100-foot riparian buffer zone throughout the project area, and ultimately reduces soil erosion into the stream, thus mitigating negative impacts to stream invertebrates. The park coordinated with both the U.S. Fish and Wildlife Service and the MS Department of Wildlife, Fisheries, and Parks as part of this EA, and neither agency responded with concerns regarding listed species.*

Paul Hadala

Comment: It would appear that this project presents an opportunity for research by conducting before and 1-, 3-, and 5-year post-construction studies to determine changes in vegetation, hydrology, and soils.

This would provide a sounder basis for decisions about future larger scoped clearing. However, it might delay project initiation and funding may not be available for it.

NPS Response: *The park has already instituted photomonitoring at the site. Water quality monitoring has also begun. The park is also planning to apply for project-funding to contract with an academic researcher to perform differential erosion control studies in forest and grassland settings. Getting funding for this study would take at least 3 years, though. In the meantime, the local Natural Resources Conservation Service office has conducted a study regarding the predicted erosion rates of loess soil under different vegetative covers and angles of slope.*

Comment: The text makes the reader curious about the amount of the donation and who gave it. If this is public information it should be given.

NPS Response: *The donor is Mr. John Nau, who is the Chairman of the National Advisory Council on Historic Preservation. The donation was in the amount of \$15,000.*

The project for which the donation was offered is in line with the park's mission of restoring segments of the park's landscape to a closer approximation of its wartime appearance, and is specifically mentioned in its GMP.

Comment: Within the area to be cleared, how many lineal feet of trench remnants and how many markers or tablets exist?

NPS Response: *At least 350 linear feet of trench remnants remain, along with four tablets.*

Comment: How the work is to be done will impact the amount of erosion and hydrology degradation. It is easier to adjust processes when using in-house forces.

NPS Response: *It is not expected that the park will have the in-house staff to perform the project, and thus the project will likely be contracted.*

Comment: Damage is minimized if the start-time and duration are selected based on climatic considerations. Clear during a low rainfall period and seed immediately after, ideally just preceding a moderate rainfall period. The silt fence should be installed before clearing begins where possible. If this area is similar to other wooded park areas, there are gullies within it today that are too steep to seed. Structural erosion control measures may be necessary to successfully seed and provide for future mowing machine operation. With 45 degree slopes some new gullies must be expected to form as the sod is developing. These gullies will "march" uphill by headcutting. Aggressive first-year maintenance will be required to counteract this. Has it been budgeted?

NPS Response: *All of these suggestions will be adopted, and the project will not proceed unless there is sufficient funding to institute all the measures necessary to protect park resources.*

Comment: Water quality and wetlands impact levels should address turbidity and downstream deposition of eroded material more specifically.

NPS Response: *Turbidity is one of the water quality parameters being measured.*

Comment: What percent of the 9.5 acres to be cleared has slopes over 12%?

NPS Response: *Most of the project area (90%?) has slopes of over 12%, as this is a ridge and ravine landscape.*

Audubon Mississippi

Comment: The site is a cultural treasure as well as one of the most significant urban parks in MS. It is also one of the largest and most significant public land-holdings in the U.S. supporting mature hardwood forests of the loess bluff ecosystem.

The fascinating natural history of the park's landscape- one that defined the site's strategic importance during the Civil War- should be recognized and cherished in concert with the more recent military history. These values should be additive, not competing. For these and other reasons, we believe the NPS is legally, ethically, and morally required to balance the multiple values of the park as it proceeds with the proposed vegetation clearing and any additional clearing, and as it considers the management of present and future cleared areas.

NPS Response: *The environmental compliance process, which this project and any future comprehensive battlefield restoration planning are subject to, ensures that these points are taken into consideration and given due attention. In addition, these considerations will be included in the CLR process.*

Comment: The EA does not, however, cite the value of that donation compared to the estimated cost of the clearing.

NPS Response: *The donation is for \$15,000, and only 9.5 acres can be restored through this EA analysis.*

Comment: What would be the procedure to monitor the clearing to ensure that all actions adhere to proper environmental safeguards?

NPS Response: *The park natural resource program manager will closely monitor the project as it is implemented, and will be stringent in ensuring that the work is carried out within the terms of the conditions set down in the scope of work and the NEPA document.*

Comment: We believe that beyond this proposed vista clearing, the park must update its General Management Plan and corresponding documents, such as a Vegetation Management Plan, before any additional clearing.

Failure to adequately review the cumulative impacts of clearing on small scales at multiple sites would very likely result in significant declines of the park's bird life and other wildlife- and run afoul of the NEPA as well as Executive Order #13186, which requires that federal agencies examine the impacts of their proposed actions on migratory birds and their habitat. The park has been identified as an Important Bird Area in MS, according to science-based criteria applied by a committee of experts representing the MS Dept. of Wildlife, Fisheries, and Parks, the US Fish & Wildlife Service, Audubon Mississippi, and other entities. The IBA program, used in more than 100 countries, is recognized by the NPS as a legitimate conservation strategy. The IBA mantle means a site is recognized as providing key habitat for certain birds; in the case of VNMP, the trigger species or groups of species are high-priority forest-dwelling birds and migrating

raptors. In particular, recent field studies by staff of the USGS and Aud. MS have confirmed the park's value to declining birds such as Swainson's and Kentucky warblers and the wood thrush. 8 species of land birds considered by the state of MS to be among the Animal Species of Greatest Conservation Need are regularly recorded in the park. More than 20 bird species considered to be of high conservation priority by the Partners in Flight land bird conservation strategy occur in the park, according to the park's draft Avian Conservation Implementation Plan prepared by the NPS.

NPS Response: *This EA only addresses the 9.5 acres at the Railroad Redoubt project area. No further battlefield restoration will be undertaken until the park has completed a comprehensive, long-term planning and compliance process, which will fully explore the issue of negative cumulative impacts to the environment.*

Comment: Finalize and adopt the draft ACIP as an official part of its planning record.

NPS Response: *This plan is still in draft form, and is a guidance and not a policy document. But it will be taken into consideration when the park considers implementing any management action that has the potential to impact avian species, especially migratory birds.*

Comment: Explore opportunities for managing open areas with native grasses that are more beneficial to birds and other wildlife, including little and big bluestems, switchgrass, and e. gamma grass.

NPS Response: *The park explored options for using ecologically native grasses, as opposed to historically native grasses, in its selection of a vegetative cover to be seeded once the project area has been cleared of woody plants. However, truly native grasses were shown by a NRCS study to be inadequate in terms of maintaining the loess soil landscape in place once the forest cover was removed.*

Comment: Consider providing constructed habitat for migratory species such as the chimney swift, such as wooden towers.

NPS Response: *In general, providing artificial habitat must be done in accordance with approved wildlife restoration (or similar) plans, and must meet certain criteria stipulated by the NPS and/or FWS. Modern, artificial structures are subject to cultural compliance issues as well.*

Comment: Complete its on-going wetland survey.

NPS Response: *A park-wide wetland inventory is scheduled for 2006.*

Comment: Complete any other surveys of fauna and flora necessary to inform future management.

NPS Response: *A mammal inventory has been initiated this year (2005). A mussel inventory will likely be performed in 2006.*

Comment: Consider ways to facilitate more on-going surveys of migrating raptors. The park is recognized as Mississippi's only known, regular concentration point for recording migrating raptors, particularly the broad-winged hawk. It is recognized as one of the only sites in the mid-south and one of the few in the central U.S. to support the Raptor Population Index proposed by the Hawk Migration Assn. of N. America and other organizations. Work with organizations supporting birding and other forms of nature tourism in the region. The park was recently recognized as one of Mississippi's Top Ten Birding Spots.

NPS Response: *The park is very interested in partnering with Hawk Watch International, and has actively inquired about participating in their surveys at Ft. Hill. VNMP participates in the local Christmas Bird Counts and an annual breeding bird survey performed by the United States Geological Survey and local Audubon Soc. It is interested in promoting and participating in nature tourism activities that raise public awareness of the natural resources of this area of Mississippi and Louisiana.*